Lei R Cao

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84 papers	6,337 citations	19 h-index	79 g-index
96 ext. papers	7,419 ext. citations	4.9 avg, IF	5.86 L-index

#	Paper	IF	Citations
84	Quasi-2D perovskite crystalline layers for printable direct conversion X-ray imaging.. *Advanced Materials*, **2022**, e2106498	24	12
83	Quantifying spatial resolution in a fast neutron radiography system. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2022**, 1027, 166331	1.2	5
82	Inorganic Perovskite CsPbBr3 Gamma-Ray Detector **2022**, 33-54		0
81	Acquiring and Modeling of Si Solar-Cell Transient Response to Pulsed X-Ray. *IEEE Transactions on Nuclear Science*, **2021**, 68, 1152-1160	1.7	
80	Demonstration of Large-Size Vertical Ga2O3 Schottky Barrier Diodes. *IEEE Transactions on Power Electronics*, **2021**, 36, 41-44	7.2	19
79	Direct metal contacts printing on 4H-SiC for alpha detectors and inhomogeneous Schottky barriers. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2021**, 989, 164961	1.2	2
78	Determination of X-ray detection limit and applications in perovskite X-ray detectors. *Nature Communications*, **2021**, 12, 5258	17.4	20
77	Depth-resolved cathodoluminescence and surface photovoltage spectroscopies of gallium vacancies in β-Ga2O3 with neutron irradiation and forming gas anneals. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2021**, 39, 052205	1.3	1
76	Large area vertical Ga2O3 Schottky diodes for X-ray detection. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2021**, 1013, 165664	1.2	1
75	Magnetic Field Measurement, Shimming and Processing for 230 MeV Superconducting Cyclotron Main Magnet. *IEEE Transactions on Applied Superconductivity*, **2020**, 30, 1-5	1.8	
74	Thermal and radiation response of 4H-SiC Schottky diodes with direct-write electrical contacts. *Applied Physics Letters*, **2020**, 116, 252108	3.4	4
73	Performance of 5-μm PIN diamond diodes as thermal neutron detectors. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2020**, 961, 163601	1.2	6
72	Performance of Perovskite CsPbBr3 Single Crystal Detector for Gamma-Ray Detection. *IEEE Transactions on Nuclear Science*, **2020**, 67, 443-449	1.7	26
71	Scintillators and detectors for MeV X-ray and neutron imaging **2020**,		3
70	Neutron irradiation and forming gas anneal impact on β-Ga2O3 deep level defects. *Journal Physics D: Applied Physics*, **2020**, 53, 465102	3	6
69	Silicon carbide detectors for high flux neutron monitoring at near-core locations. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2020**, 953, 163110	1.2	2
68	Low defects density CsPbBr3 single crystals grown by an additive assisted method for gamma-ray detection. *Journal of Materials Chemistry C*, **2020**, 8, 11360-11368	7.1	20

67	Comparison of Zr, Bi, Ti, and Ga as Metal Contacts in Inorganic Perovskite CsPbBr Gamma-Ray Detector. *IEEE Transactions on Nuclear Science*, **2020**, 67, 2255-2262	1.7	15
66	Isotope production by the high current proton beam of CYCIAE-100. *Nuclear Instruments & Methods in Physics Research B*, **2020**, 463, 119-122	1.2	
65	Isotopic concentration of uranium from alpha spectrum of electrodeposited source on 4H-SiC detector at 500 C. *Journal of Radioanalytical and Nuclear Chemistry*, **2019**, 320, 441-449	1.5	3
64	Direct printing of metal contacts on 4H-SiC for radiation detection. *AIP Advances*, **2019**, 9, 095041	1.5	3
63	Methods for improving the power conversion efficiency of nuclear-voltaic batteries. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2019**, 927, 133-139	1.2	8
62	Organohalide Lead Perovskites: More Stable than Glass under Gamma-Ray Radiation. *Advanced Materials*, **2019**, 31, e1805547	24	51
61	Field Mapping System Design for the Superconducting Cyclotron CYCIAE-230. *IEEE Transactions on Applied Superconductivity*, **2018**, 28, 1-4	1.8	4
60	Evaluation of polyvinyl toluene scintillators for fast neutron imaging. *Journal of Radioanalytical and Nuclear Chemistry*, **2018**, 318, 543-551	1.5	9
59	Optical signatures of deep level defects in Ga2O3. *Applied Physics Letters*, **2018**, 112, 242102	3.4	82
58	Determination of molten salt mass using 22Na tracer mixed with 154Eu and 137Cs. *Journal of Radioanalytical and Nuclear Chemistry*, **2018**, 318, 457-463	1.5	1
57	4HSiC alpha spectrometry for nuclear forensics with electrodeposited sources. *Journal of Radioanalytical and Nuclear Chemistry*, **2018**, 318, 667-672	1.5	3
56	Bulk GaN alpha-particle detector with large depletion region and improved energy resolution. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2017**, 849, 11-15	1.2	16
55	Monolithic integration of hybrid perovskite single crystals with heterogenous substrate for highly sensitive X-ray imaging. *Nature Photonics*, **2017**, 11, 315-321	33.9	393
54	Ex-situ and in-situ observations of the effects of gamma radiation on lithium ion battery performance. *Journal of Power Sources*, **2017**, 357, 19-25	8.9	1
53	Detection of charged particles with a methylammonium lead tribromide perovskite single crystal. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2017**, 848, 106-108	1.2	49
52	Heteroepitaxial diamond growth on 4H-SiC using microwave plasma chemical vapor deposition. *Heliyon*, **2017**, 3, e00404	3.6	3
51	Dopant compensation in alloyed CHNHPbBrCl perovskite single crystals for gamma-ray spectroscopy. *Nature Materials*, **2017**, 16, 826-833	27	343
50	Determination of the thickness of an electrodeposited thorium film with SiC alpha detectors. *Journal of Radioanalytical and Nuclear Chemistry*, **2017**, 311, 1127-1133	1.5	3

49	A radioactive tracer dilution method to determine the mass of molten salt. *Journal of Radioanalytical and Nuclear Chemistry*, **2017**, 314, 387-393	1.5	4
48	Sensitive X-ray detectors made of methylammonium lead tribromide perovskite single crystals. *Nature Photonics*, **2016**, 10, 333-339	33.9	894
47	Design, Construction, Installation, Mapping, and Shimming for a 416-ton Compact Cyclotron Magnet. *IEEE Transactions on Applied Superconductivity*, **2016**, 1-1	1.8	2
46	Demonstrating the Feasibility of Al as Anode Current Collector in Li-Ion Batteries via In Situ Neutron Depth Profiling. *Chemistry of Materials*, **2016**, 28, 556-563	9.6	13
45	Radiation effects on the electrode and electrolyte of a lithium-ion battery. *Journal of Power Sources* , **2016**, 318, 242-250	8.9	13
44	Effects of neutron and gamma radiation on lithium-ion batteries. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 345, 27-32	1.2	11
43	Gamma radiation effects on Li-ion battery electrolyte in neutron depth profiling for lithium quantification. *Journal of Radioanalytical and Nuclear Chemistry*, **2015**, 305, 675-680	1.5	4
42	Monte Carlo study of radiation-induced demagnetization using the two-dimensional Ising model. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 360, 111-117	1.2	3
41	Ab initio study of radiation effects on the Li4Ti5O12 electrode used in lithium-ion batteries. *AIP Advances*, **2015**, 5, 047110	1.5	8
40	An analysis of radiation effects on NdFeB permanent magnets. *Nuclear Instruments & Methods in Physics Research B*, **2015**, 342, 200-205	1.2	9
39	Testing of harmonic drive degrading under radiation environment. *International Journal of Mechatronics and Automation*, **2015**, 5, 69	0.2	
38	Study on radiation induced performance degradation of BLDC motor in robot servo systems. *International Journal of Mechatronics and Automation*, **2015**, 5, 154	0.2	0
37	Review of using gallium nitride for ionizing radiation detection. *Applied Physics Reviews*, **2015**, 2, 031102	17.3	45
36	Characterization of a boron carbide-based polymer neutron sensor. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2015**, 803, 82-88	1.2	9
35	Solar cells. Electron-hole diffusion lengths > 175 μm in solution-grown CH3NH3PbI3 single crystals. *Science*, **2015**, 347, 967-70	33.3	3708
34	Neutron depth profiling of Li-ion cell electrodes with a gas-controlled environment. *Journal of Power Sources*, **2014**, 248, 489-497	8.9	18
33	Neutron conversion efficiency and gamma interference with gadolinium. *Journal of Radioanalytical and Nuclear Chemistry*, **2014**, 300, 953-961	1.5	3
32	In situ quantification and visualization of lithium transport with neutrons. *Angewandte Chemie - International Edition*, **2014**, 53, 9498-502	16.4	59

31	Neutron irradiation effects on metal-gallium nitride contacts. *Journal of Applied Physics*, **2014**, 115, 123705	2.5	14
30	Profiling lithium distribution in Sn anode for lithium-ion batteries with neutrons. *Journal of Radioanalytical and Nuclear Chemistry*, **2014**, 301, 277-284	1.5	20
29	Study of GaN Radiation Sensor After In-core Neutron Irradiation. *IEEE Transactions on Nuclear Science*, **2014**, 61, 2040-2044	1.7	8
28	Transient current analysis of a GaN radiation detector by TCAD. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2014**, 761, 7-12	1.2	7
27	Characterization of magnetic degradation mechanism in a high-neutron-flux environment. *Nuclear Instruments & Methods in Physics Research B*, **2014**, 334, 43-47	1.2	4
26	**2014**,		1
25	In Situ Quantification and Visualization of Lithium Transport with Neutrons. *Angewandte Chemie*, **2014**, 126, 9652-9656	3.6	6
24	A review of low-level ionizing radiation and risk models of leukemia. *Journal of Radiation Oncology*, **2013**, 2, 263-270	0.7	4
23	Fabrication and characterization of an irradiation facility for large-sample geometry. *Journal of Radioanalytical and Nuclear Chemistry*, **2013**, 296, 83-88	1.5	
22	The Potential of Using Li-Ion Batteries for Radiation Detection. *IEEE Transactions on Nuclear Science* , **2013**, 60, 662-667	1.7	3
21	A Low-cost Neutron Radiography Device. *Physics Procedia*, **2013**, 43, 54-65		5
20	Evaluation of freestanding GaN as an alpha and neutron detector. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2013**, 719, 13-16	1.2	24
19	The effect of thermal reactor neutron irradiation on semi-insulating GaN. *Radiation Effects and Defects in Solids*, **2013**, 168, 924-932	0.9	5
18	Study of GaN radiation sensor after in-core neutron irradiation **2013**,		1
17	Neutron irradiation effects on gallium nitride-based Schottky diodes. *Applied Physics Letters*, **2013**, 103, 162106	3.4	18
16	Noise evaluation of a digital neutron imaging device. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2012**, 674, 46-50	1.2	10
15	Characterization of a new external neutron beam facility at the Ohio State University. *Journal of Radioanalytical and Nuclear Chemistry*, **2012**, 291, 321-327	1.5	18
14	Gamma-ray rejection, or detection, with gadolinium as a converter. *Radiation Protection Dosimetry*, **2012**, 151, 586-90	0.9	5

13	Neutron depth profiling technique for studying aging in Li-ion batteries. *Electrochimica Acta*, **2011**, 56, 4735-4743	6.7	61
12	Observation of phase transitions in hydrogenated Yttrium films via normalized infrared emissivity. *Journal of Alloys and Compounds*, **2010**, 490, 42-46	5.7	7
11	Cold-neutron depth profiling as a research tool for the study of surface oxides on metalsSpecial Issue on Neutron Scattering in Canada.. *Canadian Journal of Physics*, **2010**, 88, 751-758	1.1	6
10	Combinatorial study of thin film metal hydride by prompt gamma activation analysis. *Journal of Radioanalytical and Nuclear Chemistry*, **2010**, 283, 63-68	1.5	5
9	The effect of boron doping and gamma irradiation on the structure and properties of microwave chemical vapor deposited boron-doped diamond films. *Journal of Materials Research*, **2009**, 24, 1498-1512	2.5	15
8	Cerebellar neurons possess a vesicular compartment structurally and functionally similar to Glut4-storage vesicles from peripheral insulin-sensitive tissues. *Journal of Neuroscience*, **2009**, 29, 5193-201	6.6	40
7	Enhanced binding of metabotropic glutamate receptor type 5 (mGluR5) PET tracers in the brain of parkinsonian primates. *NeuroImage*, **2008**, 42, 248-51	7.9	49
6	Study of PM2.5 in Beijing suburban site by neutron activation analysis and source apportionment. *Journal of Radioanalytical and Nuclear Chemistry*, **2004**, 261, 87-94	1.5	10
5	Preliminary study of airborne particulate matter in a Beijing sampling station by instrumental neutron activation analysis. *Atmospheric Environment*, **2002**, 36, 1951-1956	5.3	41
4	Radiochemical neutron-activation analysis of uncertified ultra-trace rare earth elements in two biological certified reference materials. *Analytical and Bioanalytical Chemistry*, **2002**, 372, 397-400	4.4	8
3	Metrological role of neutron activation analysis. III. Role of INAA in sampling behavior characterization. *Accreditation and Quality Assurance*, **2002**, 7, 101-105	0.7	4
2	Metrological role of neutron activation analysis. II. Parametric INAA an ideal back-up for INAA as a primary ratio method of measurement. *Accreditation and Quality Assurance*, **2002**, 7, 50-54	0.7	5
1	Metrological role of neutron activation analysis. IA. Inherent characteristics of relative INAA as a primary ratio method of measurement. *Accreditation and Quality Assurance*, **2001**, 6, 488-492	0.7	12